University of Illinois at Urbana-Champaign

Performance Metrics

RESEARCH PERFORMANCE UPDATES BY:

UNIVERSITY OFFICE FOR PLANNING AND BUDGETING

JUNE 14, 2019

REPORTED BY:

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Peer Group

University of Illinois at Urbana-Champaign[1]
Ohio State University
Purdue University-West Lafayette[2]
University of California-Berkeley[3]
University of California-Los Angeles
University of Florida
University of Michigan-Ann Arbor
University of Texas-Austin[4]
University of Washington-Seattle
University of Wisconsin-Madison

[1]Carle Illinois College of Medicine launched in 2018.
[2]Indiana University has School of Medicine located in Purdue University-West Lafayette.
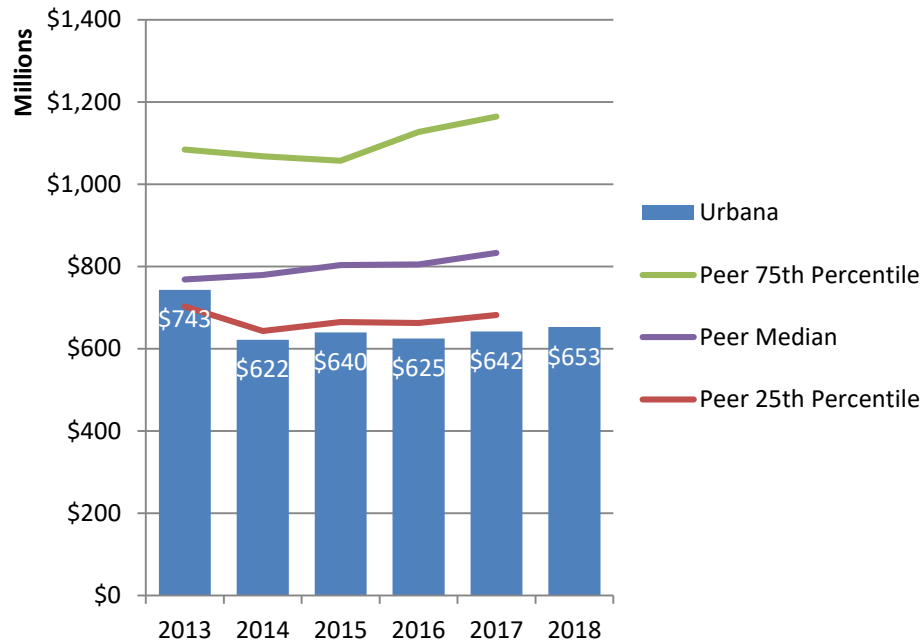[3]No medical center or college of medicine.
[4]Dell Medical School established in 2016.

Research Performance

Total Research and Development Expenditures*
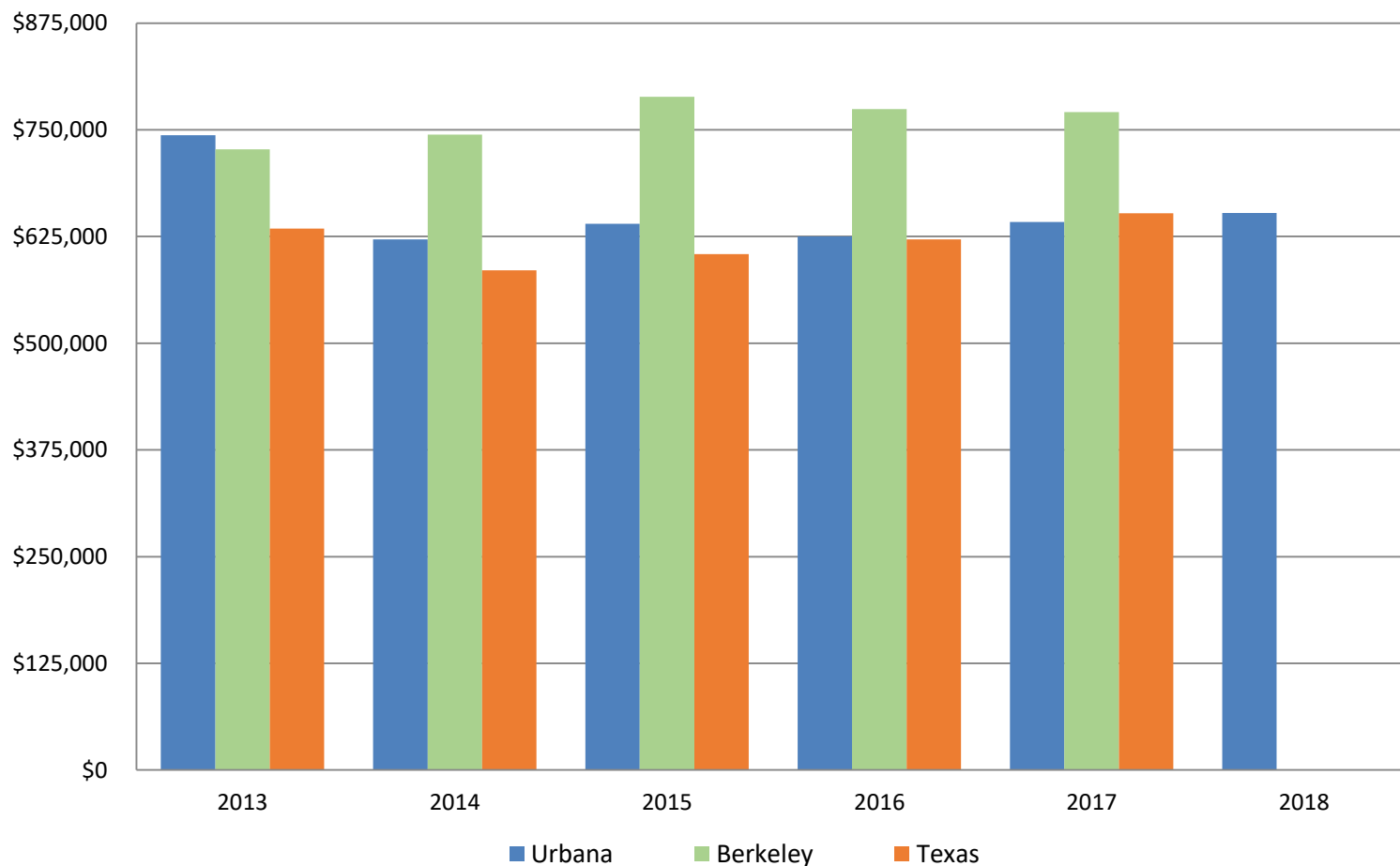## FY 2013 – FY 2018

Research and development expenditures at the University of Illinois at Urbana-Champaign are less than the peer median.

Legend:
- Urbana
- Peer 75th Percentile
- Peer Median
- Peer 25th Percentile

Urbana values: 2013: $743, 2014: $622, 2015: $640, 2016: $625, 2017: $642, 2018: $653

* As reported to the NSF's Higher Education Research and Development Survey (HERD). FY 2013 increase includes $120 million related to the construction of Blue Waters. FY 2018 peer data not available.

Total Research and Development Expenditures* Among Peers That Historically Did Not Have Medical Schools FY 2013 – FY 2018

* As reported to the NSF's Higher Education Research and Development Survey (HERD). FY 2013 increase includes $120 million related to the construction of Blue Waters. FY 2018 peer data not available.
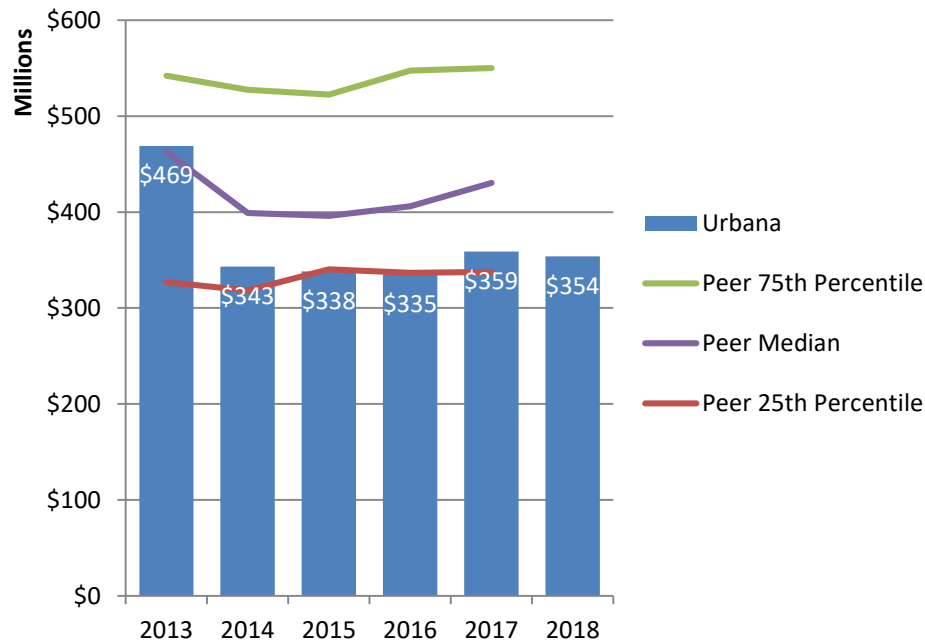
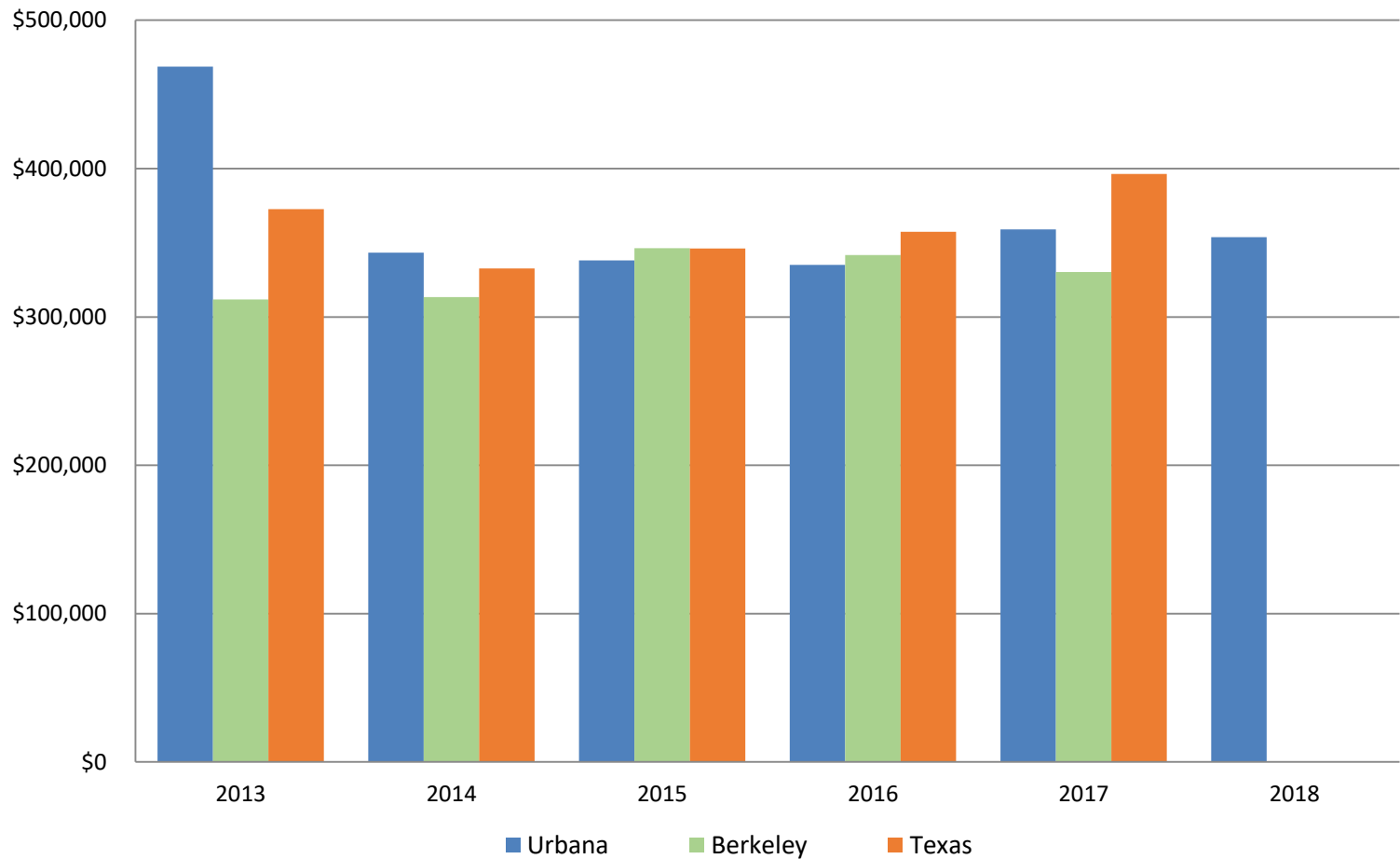# Total Federal Research and Development Funding*
FY 2013 – FY 2018

University of Illinois at Urbana-Champaign receives less total federal research funding than its peer median.

* As reported to the NSF's Higher Education Research and Development Survey (HERD). FY 2013 increase includes $120 million related to the construction of Blue Waters. FY 2018 peer data not available.

Total Federal Research and Development Funding* Among Peers That Historically Did Not Have Medical Schools FY 2013 – FY 2018
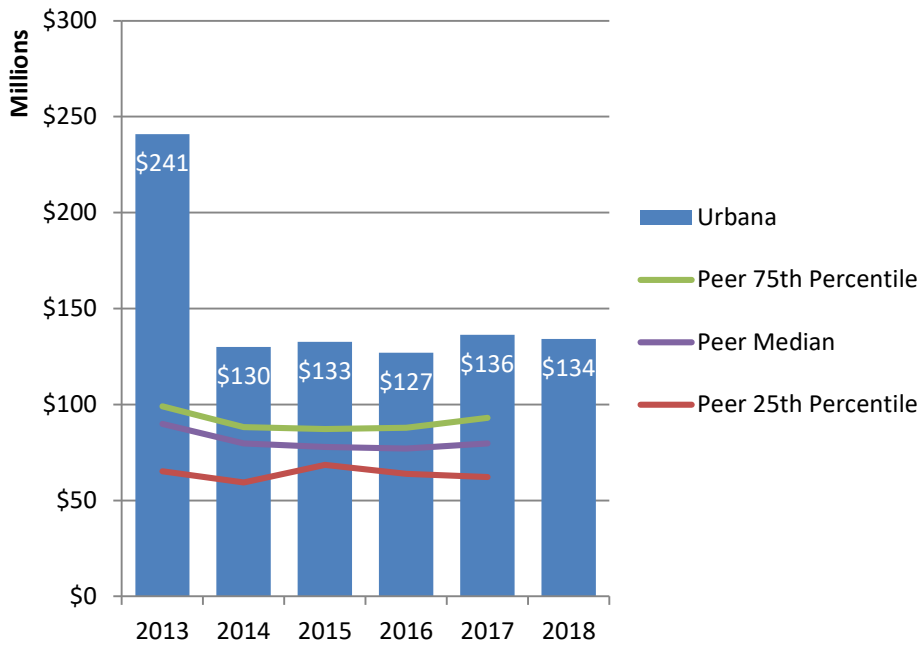

- As reported to the NSF's Higher Education Research and Development Survey (HERD). FY 2013 increase includes $120 million related to the construction of Blue Waters. FY 2018 peer data not available.

National Science Foundation Funded Research and Development
FY 2013 – FY 2018

Millions

$300
$250
$200
$150
$100
$50
$0

$241 — 2013
$130 — 2014
$133 — 2015
$127 — 2016
$136 — 2017
$134 — 2018

Legend:
- Urbana
- Peer 75th Percentile
- Peer Median
- Peer 25th Percentile

University of Illinois at Urbana-Champaign receives more NSF funding than its peer median and is consistently ranked in the top five among its peers.

NSF is the largest source of Federal R&D funding for the University of Illinois at Urbana-Champaign.

Note: FY 2013 increase includes $120 million related to the construction of Blue Waters. FY 2018 peer data not available.

National Science Foundation Funded Awards Top 15 Institutions
FY 2018

Institution	Total	Research Support	Education & Human Resources	Major Research Equipment
Leidos Innovations Corporation	$235,197	$235,197	$0	$0
Association of Universities for Research in Astronomy, Inc.	$187,663	$102,783	$0	$84,880
University Corporation for Atmospheric Research	$144,380	$144,380	$0	$0
University of Texas at Austin	$142,143	$135,052	$7,091	$0
Oregon State University	$123,208	$32,565	$2,643	$88,000
Cornell University	$118,941	$106,700	$12,240	$0
University of California-Berkeley	$109,432	$102,164	$7,269	$0
University of Michigan-Ann Arbor	$100,116	$77,841	$22,275	$0
University of Colorado at Boulder	$98,985	$83,827	$15,158	$0
Associated Universities Inc./National Radio Astronomy Observatory	$98,252	$96,749	$1,503	$0
University of Washington	$96,364	$87,513	$8,851	$0
University of Illinois at Urbana-Champaign	$95,845	$92,602	$3,243	$0
California Institute of Technology	$89,458	$89,458	$0	$0
Columbia University	$88,946	$78,749	$10,198	$0
Woods Hole Oceanographic Institution	$85,997	$85,997	$0	$0

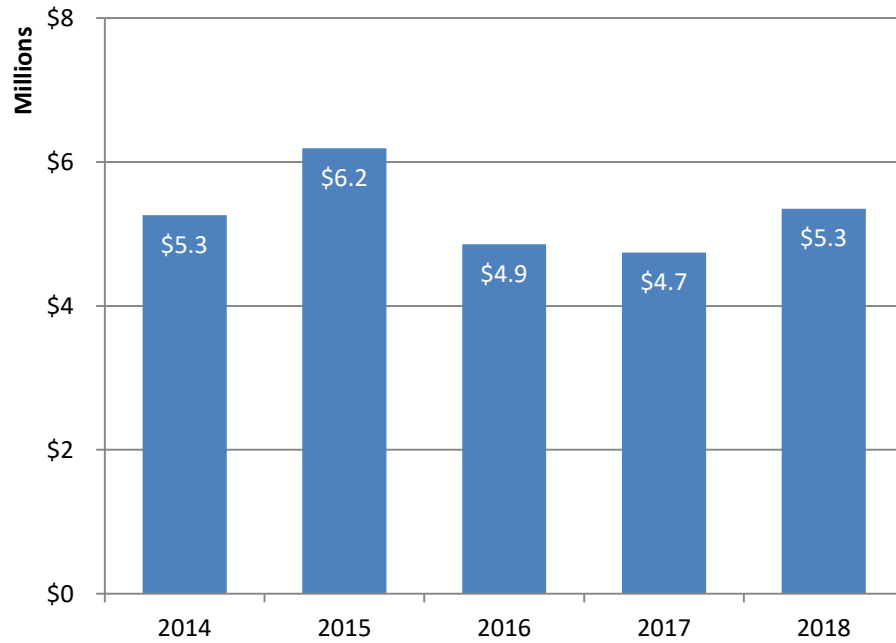Source: https://dellweb.bfa.nsf.gov/Top50Inst2/default.asp

Number of U.S. Patents Issued
FY 2014 – FY 2018
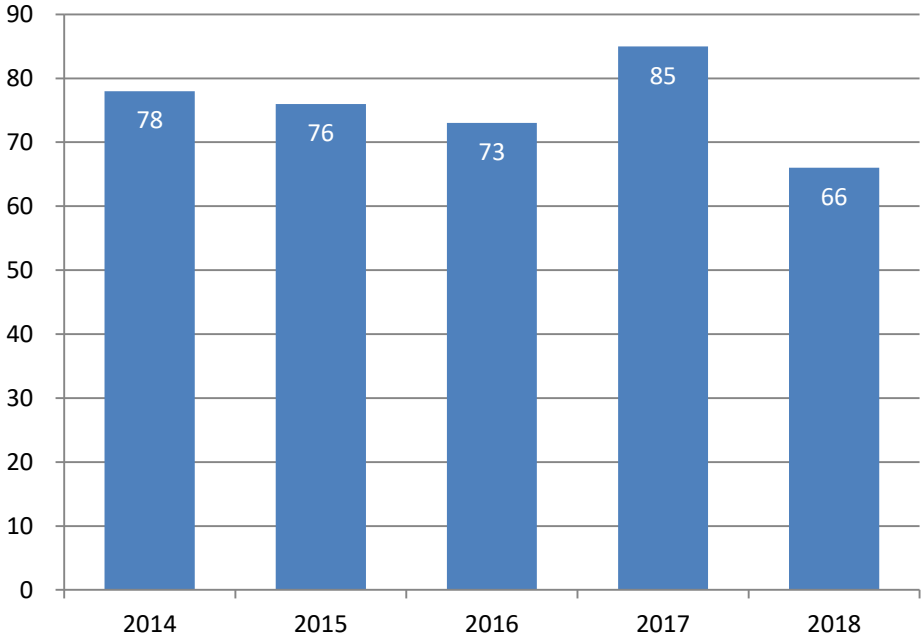
The number of U.S. patents issued to the University of Illinois at Urbana-Champaign has significantly decreased in FY 2018.
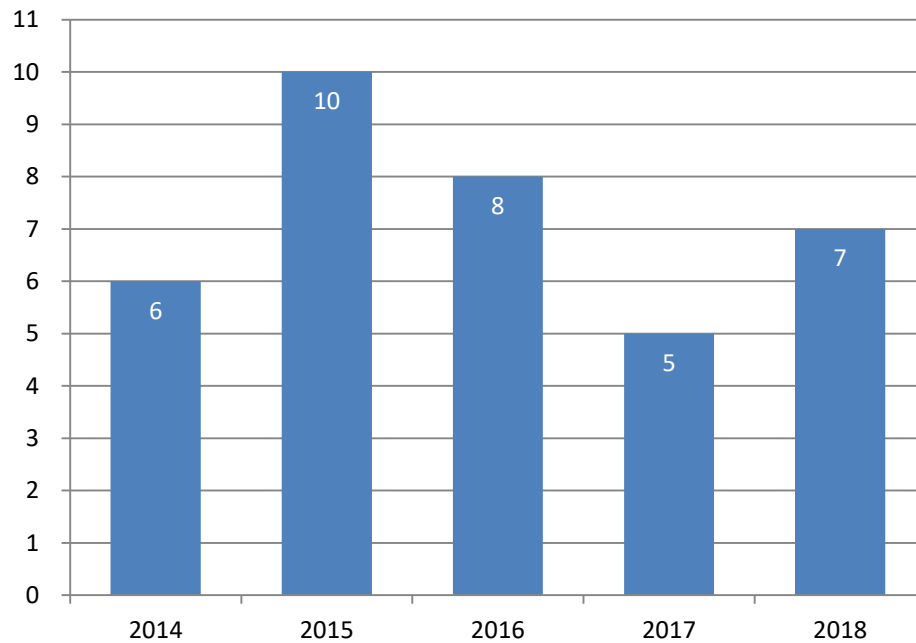
Royalties
FY 2014 – FY 2018

Royalties earned at the University of Illinois at Urbana-Champaign are higher than FY 2017.

Number of New Start-Up Companies Formed
FY 2014 – FY 2018

The number of new companies started based on technology developed at the University of Illinois at Urbana-Champaign has increased compared to FY 2017.

Overview

AREAS MEETING OR EXCEEDING EXPECTATIONS:
SUSTAINABLE AND DELIBERATE GROWTH

Research Initiatives
Cancer Center: Unanimous faculty senate approval, submission of CCSG
Center for Social and Behavioral Sciences: Director named, center launched

Infrastructure
Research Park
SPA Reunification: Pre and Post award functions united
myProposals
Partnerships: Carle, Mayo, Sandia

Outreach and Service
High-profile engagement with the local community, around the state, and across the nation:
- World of Genomics
- Odyssey Project
- Mahomet Aquifer Protections
- Cook County Water Resource Planning

ACCOMPLISHMENTS: AWARDS AND DISCOVERIES

NOTABLE PROJECTS
- CABBI, the $115M Bioenergy Research Center from the Department of Energy
- Multiple awards from the Mellon Foundation, including Humanities Without Walls
- The NIH Center for Macromolecular Modeling and Bioinformatics, now in its 28th year
- The $130M XSEDE project from the NSF, which provides computational infrastructure for the nation's scientific community
- RIPE (Realizing Increased Photosynthetic Efficiency, a project funded by the Bill & Melinda Gates Foundation), which has an explicit goal to sustainably increase worldwide food production.
- Illinois Quantum Information Science and Technology Center.

ACCOMPLISHMENTS: AWARDS AND DISCOVERIES

NOTABLE ACHIEVEMENTS
- Six Illinois faculty were recently named recipients of the Presidential Early Career Award for Scientists and Engineers (PECASE) from <u>FIVE</u> federal agencies. The PECASE is the highest honor bestowed by the United States Government to outstanding scientists and engineers who are beginning their independent research careers and who show exceptional promise for leadership in science and technology.
- Research advances in top-flight journals; May Berenbaum named PNAS editor; 9 researchers are "Highly Cited!"
- Infrastructure for the nation's scientific computing community (XSEDE)
- One of only four Bioenergy Research Centers in the country (CABBI)
- JUMP ARCHES
- Strong growth in NCSA Industry program
- Launch of Microbiome Initiative
- New National Academies Members, MacArthur Fellow, National Academy of Inventors, Prize in [2019 Prize in Food and Agriculture Sciences](#)

AREAS FOR IMPROVEMENT AND STRATEGIES TO ADDRESS THEM:
PLANS FOR THE FUTURE

1. **Continuing innovation in important business and compliance functions to better support researchers**
- Develop additional T solutions to create efficiencies and streamline processes
- Continue to improve business, regulatory, and safety programs

2. **Retaining preeminence in both disciplinary and interdisciplinary research**
- Build on reputation for excellence in the academic colleges and the campuswide interdisciplinary research institutes that report to the OVCR
- Strengthen alliances with National Labs and local and regional partners such as the Mayo Clinic, Carle, OSF, CERL, etc.

3. **Maintaining and enhancing competitiveness for Federal, Industry, Foundation and Private funding**
- Enhance Research Development activities to support large-scale grantseeking
- Strengthen "community building" activities in areas of pressing societal need
- Increasing our efforts to obtain private and philanthropic support of research
- More closely align and enhance Corporate Relations activities with the research enterprise
- Support strategic seed funding investments
- Continue to develop programs and infrastructure in support of the Carle Illinois College of Medicine, the Cancer Center at Illinois, and other biomedical initiatives

4. **Translating research innovations into society**
- Plan for Research Park success

Areas to watch

- Academic Espionage

- The Federal Research Landscape

- Aging facilities and equipment, and deferred maintenance

- State bureaucracy, particularly procurement challenges

- Sexual Harassment in the Research Enterprise